

# A Home for Worship

## University Student Center Design

by

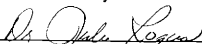
Christopher Leon McFaul

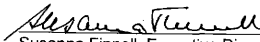
Submitted to the  
Office of Honors Programs and Academic Scholarships  
Texas A&M University  
in partial fulfillment of the requirements for

1998-99 UNIVERSITY UNDERGRADUATE RESEARCH FELLOWS PROGRAM

April 15, 1999

Approved as to style and content by:

  
\_\_\_\_\_  
Dr. Julie Rogers (Faculty Advisor)  
Department of Architecture

  
\_\_\_\_\_  
Susanna Finnell, Executive Director  
Honors Programs and Academic Scholarships

## Abstract

### **A Home for Worship: University Student Center Design**

Christopher Leon McFaul, (Dr. Julie Rogers )

University Undergraduate Research Fellow, 1998-1999,  
Texas A&M University,  
College of Architecture

The purpose of this study is to analyze the needs of religious student centers as a means to more fully address those concerns in the facility's design. A case study on the Wesley Foundation Methodist Student Center at Texas A&M University in College Station, Texas, has been performed to determine areas that students, clergy, and staff feel are inadequately represented in the facility's design. This information was used as a basis for a redesign of the current facility. This study

- Determined the user needs of a religious student center
- Analyzed the user needs
- Addressed the user needs in the facility's design
- Provided a model of the importance of the post-occupancy evaluation as a design tool

Funding problems or lack of foresight often account for design decisions that are made without a concern for the user or for the facility as a whole. Considering the increased enthusiasm for worship and fellowship among young parishioners, buildings designed without this exuberance in mind are usually not flexible enough to meet the needs of its student population. Students are more active during worship services, using guitars, synthesizers, and other musical equipment which leads to more involvement by the other worshipers who often sing and clap to the music. Students, clergy, and staff at student centers know best those areas that are lacking in their facility's design. This research accounts for their perspective in the design of student centers.



# A Home For Worship

An Analysis of  
University Student  
Center Design

Christopher Leon McFaul

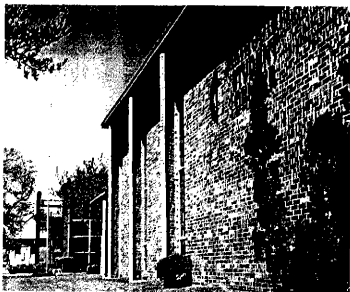
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## Objective

To illustrate the utility of the post-occupancy evaluation as a design tool.

# What is a Student Center?

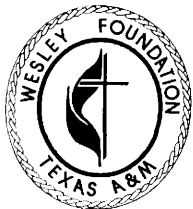


*Wesley Foundation Methodist Student Center Chapel Elevation*

- **Determine** the user needs of a religious student center
- **Analyze** the user needs
- **Address** the user needs in the facility's design
- **Provide** a model of the needs acquisition process stressing the importance of a post-occupancy evaluation.

The purpose of this study is to analyze the needs of religious student center users as a means to more fully address these concerns in the facility's design. A case study on the Wesley Foundation United Methodist Student Center at Texas A&M University in College Station, Texas, will be performed to determine areas that students, clergy, and staff feel are inadequately represented in the facility's design. This information will be used as a basis for a redesign of the current facility.

Too often because of funding problems or lack of foresight, design decisions are made without a concern for the user or for the facility as a whole. Considering the increased enthusiasm for worship and fellowship among young parishioners, buildings designed without this exuberance in mind are usually not flexible enough to meet the needs of its student population. An example is that student musicians are more active during worship services using guitars and synthesizers. This prompts more involvement by the worshippers who sing and clap. Rows of pews and a fixed altar can hinder this enthusiasm by not giving the users sufficient space to move around. Thus, the users require an informal atmosphere, but often this type of environment is not provided because the needs of the user change with time.



## **Case Study: The Wesley Foundation**

### **1963**

All male population began use of first Wesley building which boasted a two story sanctuary, two offices, a kitchenette, and a fellowship hall

### **1978**

Formal chapel and fellowship hall added onto the south end of the building

Old sanctuary converted into TV lounge

### **1988**

Flat roof of original building covered with a pitched roof by the students during a spring break work project

Outdoor patio space converted into a small group room

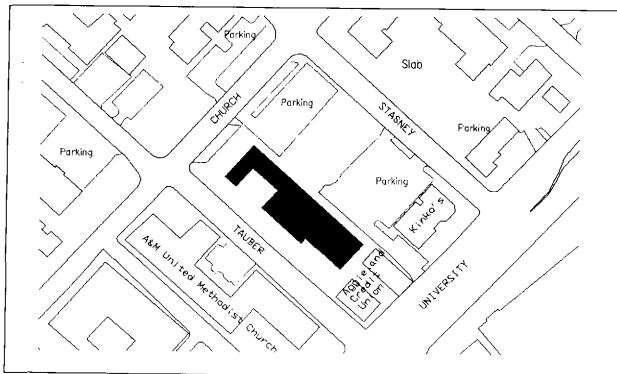
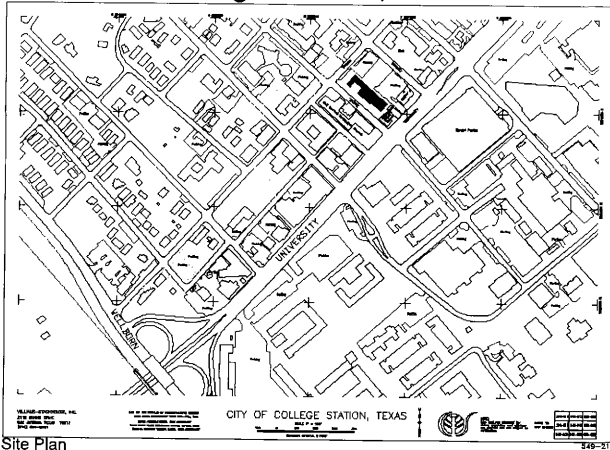
### **1998**

Upstairs room finished as office space

The case study will examine the Wesley Foundation Methodist Student Center (201 Tauber Street, College Station, TX 77840) near the campus of Texas A&M University. This facility opened in 1963 to an entirely male population. At this time the school was about a third of its current size. The chapel was added in the late 1970s and the rest of the additions were made in the 1980s. This remodeling transformed the simple design of the original student center into a long building accessed by a hallway running the entire length of the building.

The spirit of the student membership has been exuberant, as has the success of the program. The staff has also grown to include the pastor, an assistant director, four student interns, and three janitors. The facility is home to a Sunday and Wednesday night worship (it is common for attendance to be over 100), six care groups (5 to 12 people who focus on Christian accountability), nine bible study groups, Friday night recreation, special events, and many other activities during the week and throughout the year. It is a home away from home for many students who spend the majority of their free time worshipping, studying, or enjoying fellowship within its walls.

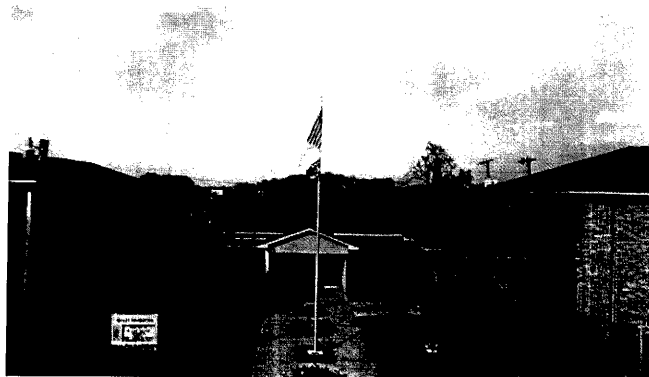
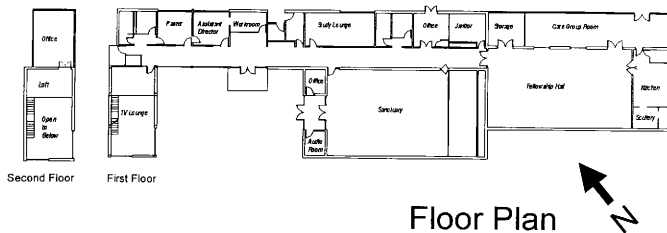
# Location: College Station, Texas



Plot Plan



# As Built Drawings



*The Wesley Foundation 1992.*



*Wesley Foundation Front Entrance*

## Hypothesis

Students, clergy, and staff know best those areas that are lacking in their facility's design. Their input on a renovation plan facilitates a design closer to their needs than could be done without their ideas.

The owner and user are often two different sets of clients. Typically, the architect only meets with the owner to determine space allocations and design goals. The architect interprets the owner's ideas, and parlays them into a design that the contractor can build. Often the users of the building are not consulted. Although the users will be the occupants of the final building, they often never see the design until it is completed and built, at which point change is often not a viable option.

Through the use of a post-occupancy evaluation, the user can inform the designer of the things that are working well in the current buildings: the rooms that are pleasant to use, the effects of furniture choice, etc. The user should also provide insight into the faults in the current building: acoustical problems, lack of flexibility, inaccessibility, etc. All this gathered information should increase the likelihood of a more successful and usable design for the user/client.

A post-occupancy evaluation performed on the existing building should give the designer current information about the user needs which will be important to the redesign of the facility.

## Methodology

The current building under study is a large facility that has undergone many remodelings. The building's history was researched with an emphasis on the changes that occurred as a result of each renovation. As built plans were obtained and verified by site visits.

A simplified Post-Occupancy Evaluation (POE) of the current building was performed with the help of the users/clients of the Wesley Foundation building to determine any perceived inadequacies in the building's design or use. The POE was administered to twenty six Wesley users. Open-ended questions were used to facilitate a qualitative interview format. The interviewer took field notes of the responses from the individual users. After the responses were member checked, they were analyzed by the researcher, and this data was divided into categories pertaining to individual room usage and ideas for improvement. This compiled information is called a constant comparison format. The results are available on pages 25 and 31 in Table 1, Table 2, Chart 1, and Chart 2. The frequency of responses gave a sense of relative importance to the categories, and the top eight improvement responses were analyzed with regard to their feasibility, urgency, and need.

After analyzing the results, the researcher synthesized the history of the building (research of remodeling) with the user's input (results of the POE) to create a remodeling plan. A redesign of the current facility addresses those needs stressed by the students, clergy, and staff as the most important needs. The remodeling plan was documented for inclusion in the final thesis.



*Fellowship Hall of Wesley Foundation*

## **Significance of the Study**

Religious student centers are a hybrid of churches and secular student centers. Most student users spend many hours inside these facilities. The spaces allotted to activities may become inadequate due to a misjudgment in terms of required spaces, growth, or other factors. Sometimes centers are designed with adults in mind instead of students. In the Wesley Foundation the large formal chapel comprising a majority of the building's square footage is inflexible and cannot be used for student activities during weekdays. When these huge volumes of space cannot be utilized for less formal weekly functions, the designs often become unsuccessful.

The POE is useful, as it focuses on the user/client groups and often provides information that is essential to future projects. Despite its benefits POE's are still not widely used. This study will show how a simplified POE can be quite useful to the design of a facility.

This research accounts for the user/client perspective in the design of student centers. The design of the facility will be in accordance with their needs. It is a wake-up call to designers who disregard the user/client groups they are representing.



*The Tabernacle ca. 1951*

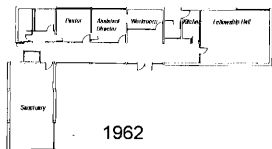


*A&M Methodist Sunday School students in 1925*

## **History: Beginnings 1919 - 1962**

The Wesley Foundation at Texas A&M University had very humble beginnings. The first Methodist student group met at A&M in 1919 (Brison, 1973), and the Wesley Foundation was organized in 1921. It was a time before women and civilians were admitted to the university; the student population consisted solely of male cadets. These cadets met in "The Tabernacle", the first building of A&M United Methodist Church. The tabernacle was built in late 1923 at a cost of \$1,500. Brison (1973) recalls the tabernacle as the definition of a temporary building:

*Wood stoves at first and later gas space heaters provided heat but seldom enough. Its ventilation was always good. It had no underpinning. The floor was creaky and cold in winter. There was seldom a service but that the battery of doors, hinged one to another, on the sides of the main worship area, were opened to provide more seating space...or closed to conserve heat...with the clanking and complaining that such doors can create. The tabernacle was often re-roofed, but never soon enough; always the cheapest roll composition roofing was used (for "soon" the building would be torn down!) No old roof was ever removed. The tabernacle was measurably taller in its later years than when new, as a result of the accumulated roofs. Longer and longer nails were required, eight penny nails being used for the last one! The interior was of uncertain design...with its swaying arches and side walls...never a beautiful building.*



1962

## History: 1962 - 1999



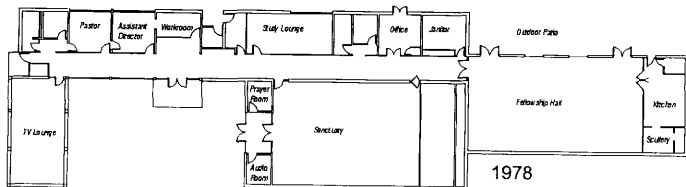
Wesley Foundation Front Entrance  
ca 1962.

In 1962, the first building of the Wesley Foundation was erected. State of the art at the time, it boasted a two story tall sanctuary, two offices, a kitchenette, and a fellowship hall. As with most buildings of the time, this facility had a flat roof, and an incredibly streamlined, "modern" look. The tall planes of brick contrasted large panes of glass. A cross was placed in a screened outdoor courtyard so that at night, a bright light shone off the cross and was visible to the student worshippers inside the building.



Construction of 1978 addition.

By 1978, the student population had outgrown the sanctuary, and a new addition was planned. This addition consisted of a much larger sanctuary, a fellowship hall, a study room, storage, a full sized kitchen with scullery, and an outdoor patio area. The sanctuary was patterned after adult worship facilities, complete with rows of pews, a prayer room, an organ, and a prayer rail in front of the altar. A television lounge was created from existing space, and a new loft housed a pool table.



1978



*The 1988 Wesley Roofing Work Project.*

After years of leaks and ruined carpet, the decision was made in 1988 to replace the flat roof of the Wesley Foundation with a pitched composition-shingle roof. The students once again saw the need for more space, and the outdoor patio area was enclosed to create a care group room. This long, narrow room was equipped with accordion dividers that could be pulled shut to section the room into smaller spaces. The students took on the roofing project over spring break, waking up early and erecting roof trusses in the beginning of the week, and nailing on shingles as the week neared an end. Julie McCollum, a student who helped to roof the building, remembered the work, "The flat roof was a very bad idea, and we worked all spring break to try to fix it."

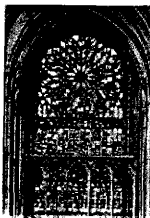
The roofing project left Wesley with an attic and a small upstairs room behind the television lounge. This small room was left unfinished until 1998 when it was made into office space for student interns. Once again, the church looked inside itself to find the labor needed. Volunteers from the Maroon and White Corps (an organization of people from A&M United Methodist Church) spent many weeks transforming the attic space into a finished room. Carol Pope, a longtime Habitat for Humanity volunteer, enjoyed lending a hand to reattach siding to the outside of the room. "A friend called me up and was asking me questions about vinyl siding. I could tell he was about to get himself into a lot of trouble, so I told him to wait until the next day when I could come up and help him."

All these renovations contributed to the linear organization of the Wesley Foundation. The main hall stretches 145 feet from the television lounge, past the offices, sanctuary, and study lounge to the fellowship hall. The facility currently encompasses over 9,000 square feet.

## Church Architecture: An Overview



*Raphael's Angels.*



*Amien Cathedral's rose window.*



*Detail of mission in San Francisco, CA.*

Worship spaces have historically been largely didactic in nature. Intricately decorated spaces use their dancing angels, gilded moldings, and complex patterns as a human expression of the grandiosity of God's creation. The soaring heights of Gothic vaults can represent the ascent to heaven. Stained glass windows in intricate tracery teach lessons from the Old Testament. Textile wall hangings explain the mysteries of the Trinity with graphical representations of the Father, the Son and the Holy Spirit. Ceiling murals depict the creation of man.

All these methods have been used to instruct the illiterate masses of the Word of God, for this was a time before the widespread availability of written media. Decades after Gutenberg's printing press allowed the first mass-production of Bibles, the general populace was still far from being able to read—much less comprehend—the teachings of the Bible. Visual aids were thus created on every available building material and became more elaborate as the skill of craftsmanship improved.

Religious architecture often defines the style of a given time period. The architecture of the Romanesque period attempted to evoke the strength and monumentality of pagan temple architecture. The architecture of the Gothic period attempted to create the biggest, most complex religious space for the glory of God. Baroque architecture is said to showcase the frivolity and non-conformity of God's creation of individual





*Roman temple inspired church.*



*St. Paul's Church in Boston, MS.*



*Alvar Aalto's modernist Church of Three Crosses.*



*Thornycrown Chapel by Fay Jones.*

beings tempted by sin. The Missionary style represents the extent of God's control over all his children. Religious architecture influenced by Modernism is defined by the simplification of life through a clean, pure, and linear architecture.

Many approaches have been used to explain the mystery of faith. However, the beauty of a church is not a relationship solely defined by its appearance. One can be inspired and mystified while still in conflict with his or her surroundings. This conflict is at times even used as an impetus to encourage an emotional, sensual experience of a religious space. Stark walls can evoke a sense of being alone with the self, alone in the world, apart from God. This architectural experience can begin a journey to find meaning in life. This often involves the need to challenge comfort or to incite rage in the social condition. It is not imperative that one feel at peace in a religious space. These needs can be expressed through architectural means, and it is this use of contrast which actually serves to unify a design at times.

*When his new tea room and garden were completed in Sakakai, he (Rikyu, a famous Japanese tea Master) invited a few of his friends to a tea ceremony for the housewarming. Knowing the greatness of Rikyu, the guests naturally expected to find some ingenious design for his garden which would make best use of the sea, the house being on the slope of a hill. But when they arrived they were amazed to find that a number of evergreen trees had been planted on the side of the garden, evidently to obstruct the view of the sea. They were at a loss to understand the meaning of this. Later when the time came to enter the tea room, they proceeded one by one over the stepping stones in the garden to the stone water basin, only in that humble posture was he suddenly able to get a glimpse of the shimmering sea in the distance by way of an opening in the trees, thus making him realize the relationship between the dipperful of water in his hand and the great ocean beyond, and also enabling him to recognize his own position in the universe, he was brought to a correct relationship with the infinite. (Kahn 1974)*

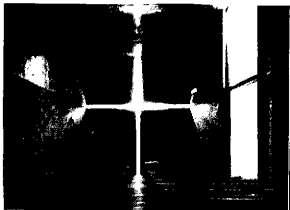


*Phillip Johnson's Crystal Cathedral.*

Although the tea room in the preceding excerpt is not a typical religious space, the concept of contrast is described superbly. The exclusion of all views except for the vista of the ocean in a humble position leads to a greater understanding than would other techniques. The contrast is between the exclusion of the view upon entry with the inclusion of the view during the tea ceremony.

Designers may choose not to rile up the human spirit with their space. They see God's nature in a fully comforting and loving light and design for this tranquility. Peaceful structures become closely tied to the land in an attempt to relate to the created world. Peaceful structures are often set in nature with a strong sense of the clouds, trees, and water features. Rhythmic patterns as leaves on trees, the clouds above and the water below, provide a far better backdrop for communion with the Lord than ever could be built by human strength. They offer the realization that God's kingdom is with us in a daily and fully attainable manner.

It is often helpful to assume that an architect intended to evoke a particular emotion. The truth is that all human experience is unique and individual. Thus a religious space may evoke fear in one while lending soothing comfort to another. Colors and building materials affect the observer in vastly different ways. White can be a symbol of purity, coldness, starkness, or calmness depending upon the perception of the individual. Concrete can be a means to express a less traditional, plastic form; but at the same time concrete can be viewed as a material which needs to be covered or decorated because of its inherent ugliness. It is childish to assume that all human reaction to architectural space can be predetermined by the architect. There is no such thing as a universal aesthetic. But it can be helpful to use examples of unique architecture to illustrate certain points about its structure, aesthetic appeal, or sense of place.



*Church of Light by Tadao Ando.*



## Aesthetics vs. Function

Even before the pyramids of Egypt and the temples of Greece, worshipers have attempted the perfect match between function and aesthetics. Most churches today are still trying to balance the functional needs of its congregation with the need for an attractive place of worship. Both principles can coexist in church architecture. Still, a perfect balance found at one moment in time may fail at a later date to meet the functional or aesthetic needs. A continual evaluation of the users' needs is essential to a successful facility. But how can this balance be met?

James and Susan White in their book Church Architecture describe in detail the pragmatic architectural concerns required for Christian services such as worship, baptism, funeral, marriage and other events. They define the rooms and amenities required for each of these activities, dividing them into help sections. However, they adopt a rather non-aesthetic viewpoint in their treatment of the religious facility. The Whites believe that "every church building should be judged in terms of how well it serves the worshipping community of faith" (White, 1988). They assert that monumental spaces hinder participation and hospitality. This view is rather narrow minded in assuming that "a church should not overwhelm or impress the beholder," (White, 1988); by taking this argument one would never experience the grandeur and overwhelming architecture of the great cathedrals of Europe. White seems to be neglecting the aesthetic almost entirely.

Long regarded as leaders in aesthetic beauty are the Japanese builders, whose simple elegance in design has been carried through to Christian architecture from centuries old Buddhist temples. Perhaps most elegant in aesthetic beauty is Takao Fujiki's photo essay of over thirty Japanese places of worship. They are not all churches in the traditional sense of the word: some are chapels, funeral halls, and even crematoria. They do share, however, artistic beauty in the representation of a higher being. The pictures lead to an understanding that function can be magnified tenfold by a truly sensory experience of the spaces for worship. Of note is the Catholic church in Gotenba designed by Ark Crew Co. The exterior façade is rather nonassuming. Simple materials in blunt shades of whites, grays and browns contrast the brightness and texture which unfolds on the interior. Rhythmic latticework panels give a structural backdrop for the light filtering canvas masking the windows. Pictures taken at intervals during the day showcase the change in light levels and its effect on the mood of the space. Simple, linear pews in a deep wood finish solemnly contribute to the hushed anatomy of the space in this sanctuary.

On the other end of the aesthetic pool proffered by Fujiki is the brutalist Church of the Light by Tadao Ando. Blank, dark planes of concrete, finely worked in the beton brute process (a concrete technique that emphasizes the natural, structural beauty of the material), draw down the sanctuary to a cross of light formed by a gap which proceeds from the ceiling to floor, from the left to right side. An omission of other windows focuses attention on the altar in this Corbusian space, lending a stark, monastic atmosphere. Yet still, a mood of worship is understood through the buildings juxtaposed on Fujiki's pages.

It is possible to pay attention to the pragmatic aspects of a church and still work within a pleasing aesthetic framework. Attention to both aspects serves the worshippers. The focus needs to be on the user and his sensory experience and sense of place in the church. This focus on user needs should be the crux of church design.

## Assessing Church Needs

An assessment of needs must recognize that both aesthetics and function are of importance. Through what channels can these decisions be made concerning the new spaces to be built? Both Purdy (1991) and White (1988) agree that over time buildings can become "millstones." Old buildings, which once greatly served their congregation, can become hindrances to the worship mood. This can occur because of a bad original design, or the lack of room for expansion once the congregation has matured and requires more space. Any number of reasons such as these can render buildings useless, and cause them to just be dead weight, hence the term "millstone." Once a church decides to do something to rectify this problem, how exactly can it go about the change in a successful manner? The two ways most often utilized are the retrofitting of an existing facility and the building of a new facility.

William Harrell in his course book Providing Adequate Church Property and Buildings (1969) sets out to do just what the title implies. He expends much energy explaining how to match function to needs in the planning of a new church facility. He stresses the use of surveys, not to determine congregational needs, but to determine attributes akin to census information (Will the church be near a shopping mall or an industrial area?). These questions, though important in a functional aspect (so as not to locate a new church near a toxic waste dump), fail to involve the congregation in actively participating in the aesthetic appeal of a new facility. Harrell's assertion is that "new buildings grow out of needs felt by responsible persons in a church," (1969) yet

his methodology fails to define who these "responsible persons" are and how it can be assured that they are making the correct assumptions concerning the needs of the church.

A more helpful way to assess congregational needs is to directly involve them in the pre-design and design processes. Martin Purdy (1991) suggests taking the decision out of the hands of a select few in the church and empowering the entire congregation to approve or reject preliminary design ideas in early and developmental phases. Popular choice is a much more democratic method of decision making than leaving it in the hands of a few "responsible persons" in the church. The more people get involved in the design of their church, the more pleased they will be in the final product, giving them a sense of ownership. Purdy lays out his process for tackling the needs acquisition process by describing the feasibility study. The theology of the church must first be determined along with the constraints, such as financial limitations. The size and scope of the project are determined as the ways of reaching a creative solution are assessed. "What once seemed a straightforward exercise, the design of a place of Christian worship and ancillary spaces for social gathering, has become a more complex task," (Purdy, 1991). This more complex task, he argues, simply requires more research into the needs of the church.

This increased research is, ironically, one of the drawbacks to the needs acquisition process. Popular choice is often not the best choice in a design situation, and it also requires much work to cull all the data into something usable by the architect. The process must always assume negotiation on behalf of the user and architect.

## The Post-Occupancy Evaluation: An Overview

### •Technical

Including structural integrity, lighting, acoustics, and environmental control systems

### •Behavioral

Including building usage territory, interaction, and image

### •Functional

Including room groupings, circulation, storage, and flexibility

The Post-Occupancy Evaluation (POE) is an extremely useful tool which can be used in the needs assessment phase of design. It involves performing an evaluation of a building to determine its current technical, behavioral, and functional uses (Rabinowitz, 1979). The division of the interviewer as an outsider (etic) using the comments of the user as an insider (emic) is a valuable tool. The evaluation can be performed through surveys with user and client, maintenance change orders, usage patterns, and environmental analysis (Wineman and Zimring, 1986). The POE historically was a purely academic process that was easily understood only by people who had specialized knowledge of the POE procedure. Many large architectural firms now perform POE's to understand how well their building performs for their client/user. An all inclusive POE is very costly and involves the employment of specialized researchers trained in this field. Often small firms cannot afford these expensive evaluations. They can, however, perform a simpler assessment. "An employee with a few spare hours can go to the site, make observations, conduct interviews, or administer questionnaires and return them to a central file" (Cranz, Taylor, and Broudehoux, 1997). The information can then be compiled into a document concerning how well a building is functioning for the client/user. Computers are making this process easier and faster. This research will use a simplified POE to show that a good assessment of user needs can be formed at low cost and with understandable methods.

## **Post Occupancy Evaluation: Post-Design**

Once only done by a few academicians and far-seeing large architectural firms, the POE has gained acceptance because of its shift from an erudite scientific exercise into a more user-friendly approach to building design. Fisher (1986) asserts "the goal of POE research is to analyze systematically the reality of buildings in use." This goal is accomplished through the information gathering process, which, according to Wineman and Zimring, is a system of checks and balances. Data are obtained through many channels: surveys with user and client, maintenance change orders, usage patterns, and environmental analysis.

Preiser (1978) suggests that users should be "shown slides of areas of the facility and asked to relate their experiences in these rooms," (83). This is a useful tool to learn how people feel towards the spaces.

Rabinowitz (1979) breaks the POE up into three distinct categories: technical, functional, and behavioral. Technical factors include any structural deficiencies such as inadequate lighting, poor acoustics, and heating and air conditioning problems. Technical factors are usually the most obvious, and have historically been the most influential in determining the success of a building. The functional evaluation consists of problems with room groupings, circulation, storage, and inadequate flexibility. It is concerned with whether the building matches up with the expressed programmatic needs. Behavioral factors focus on the physical environment's effect on the behavior of the user, and these include such things as usage, territory, interaction, and image. Organizing the POE into these categories gives a much more workable format to divide the gathered data.

Zimring and Welch (1988) argue the importance of the POE has increased in recent times, largely due to its success in three areas. The POE improves relations between architects and their clients after a project has been completed and serves as a forum to learn if the building is performing as the client envisioned that it would. The POE can also expose problems in the design that might worsen with time. Finally, the POE can provide information for subsequent buildings of the same type (p. 56).

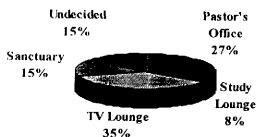


Current action-oriented POEs are careful to focus more on the user's needs, rather than only the interviewer's interests. The primary difference between older POEs and newer action-oriented POEs is determining how programmatic needs may have changed and whether the building is able to adapt to those changes. There has also been an increase recently in making the POE a more user-friendly study. "Evaluators have gotten cannier about producing action oriented studies that address clients' and architects' needs, that are clearly and graphically presented and that can be accomplished within modest budgets (Zimring and Welch, 1988).

The POE does not have to be a costly undertaking; often a few informed members of an architectural office can do it rather economically without specific training on the subject (Cranz, Taylor, and Broudehoux, 1997). A recent study on the Haas School of Business showed how dividing up the research in the office and then analyzing the parts can lead to valuable rewards. "An employee with a few spare hours can go to the site, make observations, conduct interviews, or administer questionnaires and return them to a central file" (Cranz, Taylor, and Broudehoux, 1997). When enough information has been gathered in this file, it can be compiled into a comprehensive document concerning how well a building is functioning.

## POE Results

To learn what is needed in future buildings, it is first important to understand what works well in a current facility and what needs improvement. This is where a POE is most useful. It helps to identify the user / client's perceptions of the strengths and weaknesses of a building. These perceived problems can then be addressed in the redesign. The POE allows itself to be broken into two sections. The first is concerned with an evaluation of the existing spaces, and the second contains a list of improvements that could be made. Table 1 on the following page illustrates the number of responses of those surveyed who brought up the response in their answers to the open ended survey questions.



**Chart 1: Favorite Room**

## POE Results: Constant Comparison Survey

**Table 1: Existing Spaces**

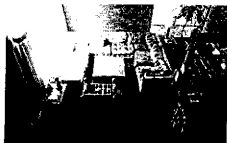
<b>Care Group Room</b>	<b># of Responses</b>
Favorite room	0
Too large	14
Odd size	13
Too small	2
<b>Study Lounge</b>	
Favorite Room	2
Too Small	4
Talking is a problem	6
<b>TV Lounge</b>	
Favorite room	9
Rearrange furniture	3
Change loft area	3
Too small	7
Couches nice	3
<b>Sanctuary</b>	
Favorite room	4
Gathering space	8
Movable seating	10
Too small	3
<b>Pastor's Office</b>	
Favorite room	7
Welcoming atmosphere	7
Couches nice	4
<b>Council Office</b>	
Favorite room	0
Unused space	6



*Sean Cantrell relaxes between classes in the TV lounge.*



*The TV lounge ca 1980.*



*The TV lounge ca 1980.*

## Existing Spaces: TV Lounge

The students chose the TV lounge as the favorite room. This was largely due to its function as a social hangout, a place to laugh and have fun with friends. The sectional leather couches provide ample room to stretch out on, though it can get quite crowded if many people are watching a football game. Carrie Hamilton likes the room's strategic location near the side door, "I like to see who comes in the building." The room was perceived as too small to accommodate all the social activities that occur inside its walls. The students believed a second set of couches arranged in the back of the room would help to alleviate this problem by providing more seating areas. Jennifer High, the worship chairman, believes the TV lounge is a symbol for the fellowship that Wesley stands for with its active, welcoming atmosphere. "The TV lounge is where the majority of bonding and socializing goes on. It is where we watch football and play dominos. There's always someone to talk to or a couch to take a nap on."



*The care group room 1998.*



*The Wesley patio ca. 1985.*

## Existing Spaces: Care Group Room

The care group room was originally designated as a patio in the 1978 addition. It was later enclosed as one room. It is a long, narrow room designed to be divided into smaller spaces for small group meetings of five to twelve people. In theory, this sounds like a wonderful, flexible solution. In practice, however, the accordion doors do little to divide the room acoustically. They are not very thick and do not reach the ceiling. Also there is not a need to use the space as one long room. It was once used for casual worship, but the population has outgrown it for that purpose. Currently it is arranged with three couches on one end of the room, while the other end is used for storage for choir equipment. Also, there are care groups and bible study groups who want to meet at the same time, but only one group can use the room at a time because of the inability to effectively divide the room. A majority of students believe the room should be sectioned off with actual walls, creating separate, smaller rooms. Care group leader Jared Johansen agrees with this idea, believing that "small rooms encourage talking and bonding as a group. We often close the partitions even though there isn't another group meeting in the room, just because it creates a more close-knit space."



*Mindy Williams, Jenni Olsen, and Margaret Owen work in the study lounge*



*The fellowship hall ca. 1977.*



*The study lounge ca. 1980.*

## Existing Spaces: Study Lounge

A hot topic of debate is the study lounge. It is furnished with tables and chairs typical of a studying atmosphere, but half of the room contains a couch, loveseat, and easy chair. This makes the room a hybrid of a social lounge and a study room. The study lounge was the fellowship lounge in the 1962 design. It was later remodeled in 1978 to accommodate studying. Many students sit on the couches to talk and have fun, which is problematic for the students trying to study. Jason Hamilton, the Council Vice-Chairman, thinks "there shouldn't be any couches, because you can't get any studying done in there." One student believed a more ascetic atmosphere would be more conducive to studying, preferring non-comfortable, straight-backed chairs to force people to concentrate on studying. This is a quite radical solution, but it shows the severity of the problem. Most students believe adding a separate social lounge space would encourage people not to talk in the study lounge.



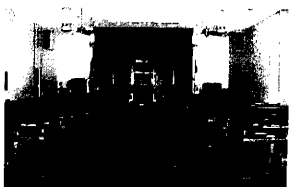
*The minister's office 1998.*



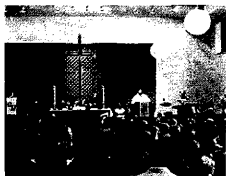
*The minister's office ca 1980.*

## Existing Spaces: Minister's Office

The second most popular space at Wesley is the minister's office. The students perceive the office as being very welcoming to them. This is not by accident. Campus Minister Max Mertz chose to arrange two couches in his office to encourage people to visit with him in his there. "I leave my door open so people can see me when they walk by. It makes it easy for them to come in and talk." This is a change from the way previous campus ministers arranged the office. "They would put their desk in the far corner and keep the door closed," Mertz said when explaining how important a welcoming feeling was to his office. Study chair Anne Hodges sees the room as "not exactly an office. It is more like an open, friendly room—like a lounge open to coming in and talking." After hours the room functions well as a small group meeting room, with the close atmosphere and furniture lending an intimate feeling to the room.



*The sanctuary.*



*A worship service ca. 1980.*

## Existing Spaces: Sanctuary

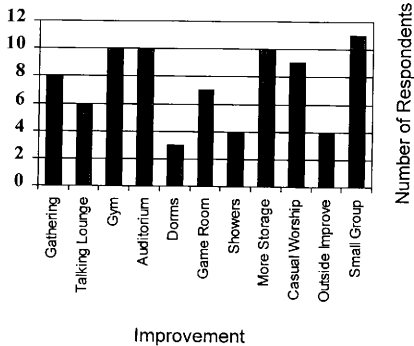
The sanctuary is a formal chapel designed to parallel an adult church. The space has been largely unaltered since its construction in 1978. It has rows of pews and a permanent altar, both of which lend a very formal feeling to the space. This is exactly what students enjoy about having Sunday night worship there. The room is also a place to pray during the week, because of its quietness. Assistant Director Sharon Ross commented about the worshipful attitude of the space, "I feel very close to God at the altar in the sanctuary." However, the sanctuary takes up the largest square footage of any room in the facility and is only used for a few hours per week. This is largely due to the pews, assesses Council Chairman Tiffany Tynes, "I love the pews, but they are confining the other uses of the room, like Wednesday night worship." Irene Campbell agrees, stating that she wants "a more laid back, relaxed atmosphere for Wednesday night worship where we don't have to sit in pews."



## POE Results: Suggested Improvements

**Table 2: Proposed Improvements**

Gathering Space / Entry	31%
Social / Talking Lounge	23%
Gymnasium	38%
Auditorium	38%
Dorm Rooms / Apartments	13%
Game Room	27%
Showers for overnight retreats	15%
More Storage	38%
Casual Worship Space	35%
Outside Improvements	15%
Small Group Rooms	42%



**Chart 2: Proposed Improvements**

## Improvements: Gathering Space / Entry

Circulation is currently a disaster before and after worship services. Approximately eighty students crowd through the hall to reach the sanctuary, and then linger, talk, and mill around after the service. This is due in part to the lack of a gathering space. In traditional church design, gathering space is accounted for in a narthex (a portion of the sanctuary space at the entrance to the church to serve circulation needs). However, the Wesley Student Center is lacking such a space. Upon approaching the front courtyard space, one is met with an ambiguous situation. One entrance leads into the student center, and a second entrance leads into the sanctuary. The sanctuary entrance is seldom used except for marriage ceremonies where a direct axial entrance is required. Thus, entrance into the sanctuary is off axis from the aisles, with the students entering and exiting the space through the side doors which were not sized for such large quantities of egress. Consolidation of the two entries into one entrance would allow axial entrance of the sanctuary space. It would also help to alleviate the current circulation crisis.

## Improvements: Social / Talking Lounge

Another current problem in the Wesley Student Center is social space for talking. The television lounge is not well suited for conversing, as the television often drowns out any talking. The care group room would be ideal for this purpose, but it is so far removed from traffic patterns that it is rarely entered or used for any other purpose than small group meeting space. So the social lounge has by default become the study lounge. The study lounge is furnished with comfortable couches which encourage leisurely study. Unfortunately, the couches also encourage talking and socializing. This makes the study group room very difficult to study in because of the noise generated by talking. A solution would be to create a talking / social lounge along the main traffic path of the public areas of the building. The most obvious space for this is the front courtyard. By enclosing this space for lounge space, it creates a more welcoming atmosphere to the facility as a whole. It would also alleviate the talking problem in the study lounge.

### **Improvements: Gymnasium**

This idea seems to be not as financially practical as the other ideas for improvement. The students are very interested in a space in which to play sports (such as basketball, indoor volleyball) and to hold exercise classes. Recreational space is usually a very feasible idea for youth and student populations in most churches. However, the location of the Wesley facility near to the Student Recreation Center at Texas A&M University makes it a less attractive improvement. The students are within a ten minute walk or a three minute drive to state of the art facilities which can be reserved by students for basketball, volleyball and exercise classes.

## Improvements: Auditorium

This idea initially seemed to be on too large a scope, like the gymnasium. However, the need for an auditorium space does not have to be dismissed. When the traditional form of an auditorium is considered, it is an area with a performance area at one end of a seating area. The facility already possesses such a space: the sanctuary. The major obstacle to using the sanctuary a performance hall for choir and drama events is the lack of a stage. The altar is crowded with weighty liturgical furniture and is not currently very flexible. The altar space is also rather narrow for performance. One option is the removal of the pipe organ, a never-used instrument which occupies a closet running the length of the altar. This would add about four feet to the altar space, making it more useful as a stage space.

### **Improvements: More Storage**

Storage is defined by the students as a very important problem. The choir currently needs storage space near to the fellowship hall, and the kitchen is in need of more storage space as well. The current storage room is the chair room adjoining the fellowship hall, but with the mass of chairs and tables required for the growing population, this room has become packed with furniture. A portion of the care group room is currently being used as a storage space for the choir risers and other equipment, but this proposes security problems. The storage of such equipment should ideally be in a lockable, secure environment. This could be accomplished by partitioning off one portion of the care group room with a wall, and preserving access through a locked door from the fellowship hall. This would allow for more secured storage space in the fellowship hall area.

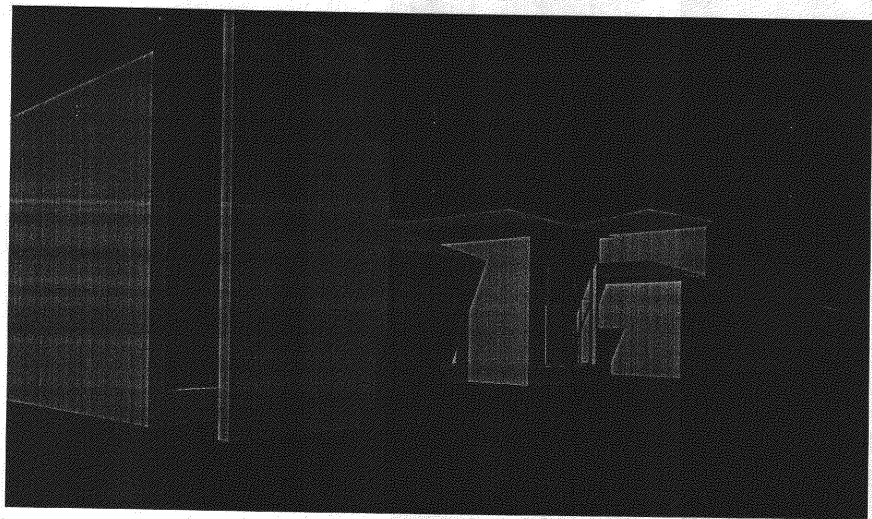
## Improvements: Casual Worship Space

Casual worship services are held every Wednesday night. The service centers around music: a praise band performs, songs are sung, and movement is encouraged. This calls for an open space focused on a performance area. Wednesday night worship was held in the care group room for a few years, but its long, narrow proportions were not very conducive to a feeling of togetherness (there was a very large distance from the performers to the people at the back of the room). After a few years, worship was moved to the TV lounge and a makeshift stage was constructed at one end. All the furniture was moved out before each service and the students stood or sat on the carpeted floor. This allowed for movement and enthusiasm in the worship service. However, once again the student population outgrew the space, with the overflow running out into the hall. The decision was then made to hold Wednesday night worship service in the sanctuary. There is definitely enough space to hold worship in the sanctuary. However, the traditional chapel furnishings hinder the enthusiasm that most students have for Wednesday night worship. The students are interested in a space for casual worship where they do not have to sit in pews. The students actually like to sit haphazardly on the floor on pillows. This is not possible with the fixed furniture of the sanctuary area. A solution would be the removal of the pews, replacing them with movable seating. This seating would most likely be sturdy upholstered chairs which could be stacked when not in use (this scheme would create the need for a chair storage room near the sanctuary).

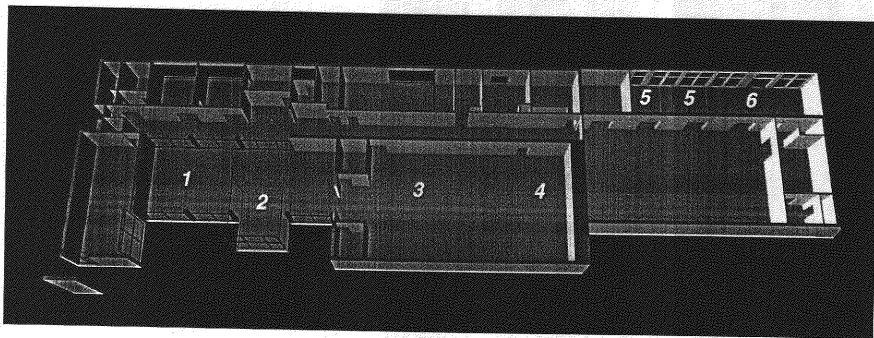
### **Improvements: Small Group Rooms**

The need for more small group meeting space is evidenced by the growth of small groups at Wesley. The students participate in six care groups, nine bible study groups, and various other activities throughout the week which require the meeting of 5 to 12 people in an acoustically separated space. The care group room was created with this idea in mind, but due to insufficient acoustic separation of the accordion division doors, only one group can meet at one time. Care group leader Mindy Williams points out that currently "only 1/3 of the room is being used for a care group room." There is living room furniture set up at the far end of the room, leaving the majority of the room unusable. The need for more small group meeting space could easily be accommodated by dividing up the care group room into smaller rooms with acoustically insulated partition walls. The only other thing which would need to be remodeled is changing the picture windows looking into the fellowship hall into operable doors as a means of egress into the new meeting rooms. The rooms could then be furnished and air conditioned separately.





## Remodeling Plan



## Remodeling Plan

1. Add talking lounge to lessen distraction in study lounge.
2. Redefine entry space to allow for a gathering space.
3. Remove pews and install movable seating to facilitate casual worship.
4. Remove organ to allow space for stage for choir and drama events.
5. Install partition walls to make into small meeting rooms.
6. Storage space.

## Design Decisions

The design was a synthesis of the information obtained from the POE, my analysis of the needs of the church, and my own design ideas.

The front entry space is the most necessary improvement in my opinion. This space needs to be an open area where students feel comfortable and at home. It will serve as the hub of activity for the entire building, as it is at the center of the building and in the path of greatest traffic flow. The roof pitch has remained constant with the existing roof to maintain a minimum of complexity in construction. A ramp will be installed at the new main entrance to allow for handicap accessibility to the Wesley Foundation. Solar glass should be considered because of western exposure. There is an attempt to blend together the materials on the front façade. The existing brick is offset by glass window walls. The room should be furnished with sturdy furniture set up in an informal conversational style which can be easily moved for special events. A strong focus is made at the entrance with a cross that is visible from the street.

The simplest design improvement will be the division of the care group room. It requires the building of two sound-insulated partition walls and the removal of carpet from the new storage room. The final step would be to furnish the rooms with living room furniture.

Removing the pipe organ is a large undertaking, and it is uncertain if there would be another church

who would be interested in installing it in their own sanctuary. However, its removal would lend an extra four feet to the altar, making more room for a stage for musical events.

Replacing the pews is a very costly renovation. Quality liturgical furniture is rather expensive. Selling the pews might help fund the new movable chairs. Along with this option would go the installation of a hard surface flooring system, because the moving of chairs would be very hard on a carpeted floor.



**Proposed front facade**

## Critical Overview

The POE proved itself to be a very useful tool in providing structured data from the users about their current facility. This study was very inexpensive in terms of materials (copying surveys onto paper was the only real material expense). The actual interviews took about four hours spread over a week. The difficult part of the POE was deciding how to organize and analyze the data received into a remodeling plan.

The use of the computer has added a new aspect to this research. With the introduction of computer generated forms, traditional physical models have become a thing of the past. However, this also can degrade the quality of the final presentation, making all the images appear odd because of the failed attempt to create photo-realistic images of a design. Because of the complexity of rendering programs and the difficulty of producing a three dimensional computer model, the design suffered in terms of materials and finishes. An added hassle is the frequency of malfunctions causing lost research hours due to disk failures.

Negative aspects of the POE are as noted. The POE can only take a design so far. Once the user input is obtained, it is still up to the designer to fully integrate this data with his/her expertise. Often self report data received from the client is not fully representative of the facility, necessitating further site visits by the designer. There is also a

tendency for the designer to assume that once a POE has been performed, he or she knows everything necessary to design the facility. This can cause a negligence on the part of the designer to obtain further user input as the design progresses.

Another criticism of this study is that it focused more on the obvious answers received from the users. A focus on the obvious causes the deeper issues of future expansion and other important (but not necessarily obvious) concerns to be neglected. The POE provided a format for the user and architect to interactively negotiate; however, this potential was underutilized. My own switching between the roles of researcher and architect were also problematic. A tension was created between trying to educate the client about their building and trying to produce a successful remodeling design.

The methodology of this study as applied was imprecise. The qualitative interview style utilized does not lend itself to being quantitatively analyzed. The interviews obtained were easily translated into narrative text on the specific rooms in question. However, the respondents did not all address the same concerns for a given question, causing most improvements to appear representative of only a minority of the respondents. In reality, those shown on the graph were the only ones who even addressed the concern at all. These construct problems with my survey methods could be rectified in a successive study using a Likert scale or a true/false question type in addition to the qualitative interviews. Also important would be the continued involvement of the users in the design process. This study effectively obtained information from the users in the pre-design phase, but then their input was not continually sought in the other phases of design.

User reactions to the final design were very positive. Music chair Traci McKelvy remarked that she had been having an informal meeting with other students earlier the same day on the remodeling needs of the facility, and she is very interested in the removal of the organ. She viewed the other changes and agreed with their necessity. Student Irene Campbell was excited with the decision to retrofit the sanctuary with movable seating, "Now we could have casual worship on Wednesday nights again." Campus minister Max Mertz was pleased with the design. He brought up that the new entrance and lounge area would increase the community visibility of the student activities from the exterior of the building. He said that fundraising is the next step before the facility redesign could be realized.

In conclusion, this study achieved its objectives and proved its hypothesis. The user needs were determined with a POE, and these needs were then turned into a remodeling plan. The POE process was proved to not be labor intensive or costly to produce, and the user reactions to the redesign were positive. The users seemed very pleased with how closely the final design paralleled their visions of the redesigned facility.

## References

- Brison, Fred R. (1973). The A&M United Methodist Church: The First Fifty Years: 1923-1973. Austin: Capital Printing Co.
- Cranz, Taylor, A. & Broudehoux, A. M. (1997, January). Complexity on Campus. Places. pp. 38-51.
- Fisher, T. (1986, May). Energy Past and Future. Progressive Architecture. pp. 114.
- Fujiki, T. (1997). Religious Facilities: New Concepts in Architecture & Design. Tokyo: Meisei Publications.
- Gieselmann, R. (1972). New Churches. Tokyo: Meisei Publications.
- Harrell, W. A. (1969). Providing Adequate Church Property and Buildings. Nashville: Convention Press.
- Kantrowitz, M. (1986). POE: Passive Solar Energy. Progressive Architecture. pp. 119-123.
- Kahn, L. (1974). The Dome Book. Bolinas: Shelter Publications.
- McCormick, G. E. (1992). Planning and Building Church Facilities. Nashville: Broadman Press.
- Purdy, M. (1991). Churches and Chapels: A Design and Development Guide. Oxford: Butterworth.



- Preiser, W. F. E. (1978). Facility Programming: Methods and Applications. Pennsylvania: Dowden, Hutchinson & Ross, Inc.
- Rabinowitz, H. Z. (1979). Postoccupancy Evaluation. In J. C. Snyder & A. J. Catanese (Ed.). Introduction to Architecture. (pp. 412-430). New York: McGraw-Hill Book Co.
- Robert, P. (1989). Adaptations: New Uses for Old Buildings. New York: Princeton Architectural Press.
- Sovik, E. A. (1973). Architecture for Worship. Minneapolis: Augsburg Publishing House.
- White, J. F., & White, S. J., (1988). Church Architecture: Building and Renovating for Christian Worship. Nashville: Abingdon Press.
- Zimring, C., & Welch, P. (1988, July). POE: Building on 20-20 Hindsight. Progressive Architecture. pp. 55-65.
- Zimring, C. & Wineman, J. (1986, May). Florida A&M School of Architecture. Progressive Architecture. pp. 115-117.

## **Appendices**

**Appendix A: POE Interview Questions**

**Appendix B: Personal Statement**

## **Appendix A: POE Interview Questions**

What activities would you like Wesley to do that can't be done in our facility?

What problems have you noticed in the design of the building?

What kind of new facility would you like to see built?

Do any of the rooms seem inadequate for their usage?

Does the building seem inviting upon entry? If so, why?

What improvements would you make in the design of the building?

What is your favorite room at Wesley and why?



## Appendix B: Personal Statement

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As a senior environmental design student in the College of Architecture at Texas A&M University, I have used my curiosity to explore my own topics of interest. I created my own sketching class complete with a schedule and curriculum to explore the plantation homes of Louisiana. My interest in creating a usable object out of "useless" materials spurred the creation of my fish tank inside of a console television set and my lamp made from a mannequin. In short, I am a creative self starter who loves to learn.

I have parlayed this enthusiasm into research on my own church. I have been an active member of the Wesley Foundation for three years, and in that time I have noticed deficiencies in the facility. Through informal research with my friends (the users of the building), I found that others shared these concerns and that it was a very pressing issue to the student population. I think the facility thus warrants such a study.

I am currently carrying out this research as part of the University Undergraduate Research Fellows Program through the Honors Program at Texas A&M University under the advisement of Dr. Julie Rogers. The Fellows program is the most demanding undergraduate research program on the campus, with the culmination being a senior honors thesis.

**Chris McFaul**

3625 Wellborn #1401  
Bryan, TX 77801  
(409) 268-6042  
[brain@tamu.edu](mailto:brain@tamu.edu)

**Career Objective**

To obtain job experience and gain a general view of the workings of an architectural office.

**Education**

*September 1996 to Present*

Texas A&M University. Bachelor Degree in Environmental Design. Expected Graduation Date: December 1999.

Design Studios stressing actual client relations, programming, model building, photography, and presentation drawings. Architectural History classes ranging from primitive to modern architecture.

**Skills**

AutoCad 14, MS Office  
Model Building  
Hand Drafting  
Black & White Darkroom Experience (5 years)  
Photography  
Life Drawing / Sketching

**Specialization**

Furniture Design  
Model Photography

**Honors, Awards & Achievements**

University Undergraduate Research Fellow  
National Merit Scholar  
President's Endowed Scholarship TAMU  
Phi Kappa Phi (Interdisciplinary National Honor Society)  
Phi Eta Sigma (Freshmen National Honor Society)  
Dean's Honor Roll List  
4.0 Overall Grade Point Ratio (4.0 Scale)

**Activities**

Wesley Foundation United Methodist Church  
Outreach Chairman  
Care Group Leader  
Choir  
Aggie Habitat for Humanity  
American Institute of Architecture Students  
TAMU Chapter Member  
Career Fair Host